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10/646,009

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Kevin W. Schneider

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LANIER FORD SHAVER & PAYNE P.C.  
P O BOX 2087  
HUNTSVILLE, AL 35804-2087

EXAMINER

SHAND, ROBERTA A

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

07/07/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/646,009 | <b>Applicant(s)</b><br>SCHNEIDER ET AL. |  |
|                              | <b>Examiner</b><br>Roberta A. Shand  | <b>Art Unit</b><br>2416                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20, 22, 23, 25-28 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 9-19, 23, 25, 26, 28, 31 and 33-35 is/are allowed.
- 6) ☒ Claim(s) 7, 8, 20, 22 and 27 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Xu (U.S. 7181142 B1).

3. Regarding claims 7 and 20, the admitted prior art teaches a data communication system having a central office transceiver residing at a central office (22) and an intermediate terminal transceiver residing at an intermediate terminal (54), the central office and intermediate terminal transceivers coupled through a feeder distribution interface (33) to customer transceivers, comprising: means for determining a distance between the intermediate terminal transceiver and the feeder distribution interface and a distance between the central office transceiver and the feeder distribution interface (paragraphs 25-27).

4. The admitted prior art does not teach power reduction means for automatically reducing a transmission power of the intermediate terminal transceiver, based on each of the determined distances, in order to ensure that signals transmitted by the intermediate terminal transceiver are spectrally compatible with signals transmitted by the central office transceiver.

5. Xu teaches (col. 13, line 29 – col. 14, line 10) power reduction means for automatically reducing a transmission power of the intermediate terminal transceiver, based on each of the determined distances, in order to ensure that signals are spectrally compatible. It would have

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been obvious to one of ordinary skill in the art at the time the invention was made to modify the admitted prior art to include Xu's power reduction to maintain balance in power.

6. Claims 8, 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Xu (U.S. 7181142 B1) and further in view of Ulanskas (U.S. 6532277 B2).

7. Regarding claims 8 and 22, the admitted prior art and Xu teach all of the limitations of claim 7.

8. The admitted prior art and Xu a means for automatically providing each of a plurality of intermediate terminal transceivers residing at the intermediate terminal with values indicative of an approximate distance between the central office and the feeder distribution interface and of an approximate distance between the intermediate terminal and the feeder distribution interface.

9. Ulanskas teaches (col. 4, lines 36-49) estimating distances based on a test signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the admitted prior art and Xu to include Ulanskas' distance estimation to overcome the disadvantage potential for crosstalk.

10. Regarding claim 27, the admitted prior art teaches (fig. 1) a communication method, comprising the steps of: transmitting a signal from at least one intermediate terminal transceiver (54) through a cable to a first customer transceiver residing at a first customer premises (22), the cable coupled to a feeder distribution interface (33) that is coupled to the at least one

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intermediate terminal transceiver (54) and at least one central office transceiver (22), the cable propagating at least one signal transmitted from the at least one central office transceiver (22).

11. The admitted prior art does not teach ensuring spectral compatibility between signals transmitted by the at least one intermediate terminal transceiver and signals transmitted by the at least one central office transceiver to a second customer transceiver residing at a second customer premises, the ensuring step comprising the step of automatically controlling a power output of the at least one intermediate terminal transceiver.

12. Xu teaches (col. 13, line 29 – col. 14, line 10) power reduction means for automatically reducing a transmission power of the intermediate terminal transceiver, based on each of the determined distances, in order to ensure that signals are spectrally compatible. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the admitted prior art to include Xu's power reduction to maintain balance in power.

13. The admitted prior art and Xu does not teach estimating a distance between the at least one intermediate terminal transceiver and the first customer transceiver based on at least one signal transmitted between intermediate terminal transceiver and the first customer transceiver, wherein the controlling step is based on the estimated distance, a distance between the at least one intermediate terminal transceiver and the feeder distribution interface, and a distance between the at least one central office transceiver and the feeder distribution interface.

14. Ulanskas teaches (col. 4, lines 36-49) estimating distances based on a test signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the admitted prior art and Xu to include Ulanskas' distance estimation to overcome the disadvantage potential for crosstalk.

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***Allowable Subject Matter***

15. Claims 1-6, 9-19, 23, 25, 26, 28, 31 and 33-35 are allowed.
16. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A. Shand whose telephone number is (571)272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Roberta A. Shand

/R. A. S./

Examiner, Art Unit 2416

/William Trost/

Supervisory Patent Examiner, Art Unit 2416